

# Adding/Subtracting Polynomials

**Example 1:**  $(18x - 2x^2 + 15) + (3x^2 - 10 - 8x)$

**Example 2:**  $(6x^2 + 7x) - (10x + 3x^2 + 2)$

**Directions:** Solve the following problems. Match that answer to the correct letter of the alphabet.  
Enter that letter of the alphabet on the blank corresponding to the problem number.

7   12   12   7   14   12   9   1   2   15   8   7   6   15

16   11   13   5   15   5   8   10   9   4   14   16   3

**A**   **B**   **C**   **D**   **E**   **F**   **G**   **H**   **I**  
 $5x - 2y$     $4x + 11$     $-4$     $-5x^2 - 3x + 2$     $0$     $3x^2 + 11$     $4$     $3x^2 - 16$     $-3x - 8$

**J**   **K**   **L**   **M**   **N**   **O**   **P**  
 $9x - 10y$     $2x^2 + 12x + 10$     $x^2 + 2$     $5x - 5y$     $3x^3 + 10x^2 - 42x + 8$     $2x + 4y$     $2x - 4y$

**Q**   **R**   **S**   **T**   **U**   **V**   **W**   **X**   **Y**  
 $-12$     $2x^2 + 5x - 8$     $2x^2$     $12$     $5x^2 + 10x + 6$     $13x^2 + 16x - 10$     $x^2 - 2$     $1$     $x^3 + 5x^2 + 2$

**SIMPLIFY:**

1.  $(2x^2 + 4x + 1) + (3x^2 + 6x + 5)$

9.  $(x^2 + 6) - (6 - x^2)$

2.  $(x + 6) + (3x + 5)$

10.  $(3x - 6y) + (2x + y)$

3.  $(x^3 + 2x^2 - 4) + (3x^2 + 6)$

11.  $(5x - 6) - (8x + 2)$

4.  $(4x - 2y) - (2x - 6y)$

12.  $(3x^2 + x - 4) - (4x - 6 + 8x^2)$

5.  $(x^2 + 6x - 4) - (x^2 + 6x - 4)$

13.  $(x^2 + 6x + 5) + (x^2 + 6x + 5)$

6.  $6x - 4 - 6x$

14.  $(3x^3 + 6x^2 - 18x) + (4x^2 - 24x + 8)$

7.  $3x + 6y - 8y + 2x$

15.  $(3x + 6) - (3x - 6)$

8. Find the difference of  $(6x^2 + 3x - 5)$  and  $(4x^2 - 2x + 3)$

16. Subtract  $(6x^2 + 8x - 6)$  from  $(7x^2 + 8x - 4)$